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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,244	03/13/2001	Motoyuki Kato	G5030.0027/P027	9167

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EXAMINER	
RUTTEN, JAMES D	

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/804,244	KATO ET AL.	
	Examiner	Art Unit	
	J. Derek Rutten	2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Acknowledgement is made of Applicant's amendment dated July 15, 2004, responding to the March 15, 2004 Office Action provided in the rejection of claims 1-5, wherein claims 1 and 2 have been amended, no claims have been canceled, and new claims 6-19 have been added. Claims 1-19 remain pending in the application and have been fully considered by the examiner.

2. Applicant has primarily argued that the claims are not anticipated by the Tock reference because it does not disclose new claim limitations. This argument is not persuasive, as will be addressed under the *Prior Art's Arguments – Rejections* section below.

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

4. It is noted that Applicant has not particularly pointed out those portions of the specification from which the amended and/or new claims draw support.

5. Applicant has argued on page 8 that the use of the term "information" is not indefinite, and provided a definition obtained from Merriam-Webster online dictionary. The examiner's initial interpretation of the term was to use it as a "reference field". Applicant claims this is too narrow an interpretation. While the examiner is unaware of a broader interpretation in the context of an information processing device, the argument that the term is generally understood is convincing. Interpretation is made in light of the definition supplied by the Merriam-Webster reference: "a signal or character (as in a communication system or computer) representing data".

6. Applicant argues beginning on page 8 and extending to page 9, that claim 4 is not indefinite in light of the several embodiments interpreted by the examiner (page 9 paragraph 3). Applicant further argues that the Office action limits the meaning of the claim in light of a portion of the specification. It is acknowledged that the claims should be read in light of the specification. However, claim limitations should not be read into the claims from the specification. Further, the claims must be supported by the specification. Applicant is invited to particularly point out any additional portions of the specification from which the claim limitation ("...said result...is stored...in a head code data.") draws support for additional interpretations or embodiments. While the rejection of the claim is withdrawn, interpretation will continue to be made in light of page 10 lines 28-29 of the originally filed specification.

7. Applicant's arguments filed July 15, 2004, have been fully considered but they are not persuasive. Applicant argues in the paragraph starting on page 9 that the Tock reference fails to disclose various claim elements including the act of extracting first and second reference data comprising class and field related reference data. This argument is not convincing, as Tock discloses these elements as cited in the rejection of claim 1 below in column 7 lines 45-52.

Applicant makes a similar argument on page 10 with respect to claim 2, with the addition of reference data comprising an index value. This argument is also not convincing, and applicant is directed to Tock column 7 lines 16-17 as cited in the following rejection of claim 2 for disclosure of a field index. Although Tock does not use the term "index", a pointer is used as an index into the field table. The terms "pointer" and "index" both refer to the use of an offset into a region of data. Thus, the rejections of the claims are maintained.

8. Applicant argues at the bottom of page 10 in regard to claim 9 that Tock does not disclose a "position index data". This argument is not convincing. Further inspection of Tock column 7 lines 16-17 reveals index data as discussed in relation to claim 2.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 14 describes the steps of extracting and storing in the context of creating a new data container, and renaming a data container. These limitations could not be found in the originally filed specification. There is no express discussion of a "data container", or of creating or

renaming such data container. For the purpose of further examination, the term "data container" can be interpreted in the context of object-oriented technology as an "object".

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,815,718 to Tock (hereinafter referred to as "Tock").

As per claim 1, Tock discloses:

A program executing method to execute a program written in an interpreter language (Abstract, lines 1-5: "A **method** and system for providing an **executable module** having an address space for storing program data that is to reside in a read-only storage medium and an address space for storing program data that is to reside in a random access memory is herein described."), *comprising the steps of:*

extracting reference data comprising a first and second reference data, said reference data is used for specifying a location to be accessed in a memory, and resolving a reference using said reference data (column 5 lines 56-58: "The object

module is then transmitted to the linker 136 which **generates a memory layout** for the classes in the application."; column 5 lines 58-60: "Once the memory layout is determined, the linker 136 **resolves all symbolic references** and replaces them with **direct addresses.**"),

said first reference data comprising a resolved class related reference data and said second reference data comprising a resolved field related reference data (column 7 lines 45-52: "A **first entry contains the name of the class** and the name of the superclass 502. These names are stored as string constants and the first entry contains pointers to the locations of these strings in the constant pool. **The next entry pertains to the fields** or instance variables. A header 504 is used to denote the number of fields in the constant pool. The various fields 506 follow the header.");

storing result data of said resolved reference linking to said program through said reference data, said two steps of extracting and storing being executed before said program is executed (column 3 lines 19-22: "A browser partitioned in this manner can be **initially stored in the read-only memory** of the client computer. When the system powers on, the second address space is preloaded into the RAM."; also column 5 lines 65-67: "The output from the linker 136 is a **preloadable executable module** 306 containing the methods and data for these two

address spaces." Comment: The executable module output from the linker contains the result data of the resolved reference. This module is executed only after the steps of extracting, resolving, and storing as referenced above.)*; and*

specifying a location in said memory to be accessed based on said result data of said resolved reference linking to said program through said reference data, when said program is executed which requires to access said memory (column 2 lines 7-11: "By **executing** a large portion of the browser from read-only memory, the browser has additional RAM storage to store information-content and executable modules that it can obtain from other server computers that the client is in communication with." Comment: In this passage, Tock executes an application built using the result data obtained via the above mentioned steps including resolving references using reference data to produce result data. Execution inherently involves specifying memory locations otherwise the processor would not be able to obtain required data.).

As per claim 2, Tock discloses:

An information processing device provided with a program written in an interpreter language (column 2 lines 53-55: "An **application** developed in the **Java programming language** is executed on such a client **computer**."), *comprising:*

a storing means to store result data of a resolved reference linking to said program through a reference data comprising a first and second reference data, at least one of said reference data to specify a location in a memory to be accessed (column 5 lines 56-58: "The object module is then transmitted to the linker 136 which **generates a memory layout** for the classes in the application."; column 5 lines 58-60: "Once the memory layout is determined, the linker 136 **resolves all symbolic references** and replaces them with **direct addresses.**"; also column 5 lines 65-67: "The output from the linker 136 is a preloadable **executable module** 306 containing the methods and data for these two address spaces."; further, see FIG. 3 element 306: ROM/RAM; Comment: The executable module contains the result data for specifying memory locations, and is stored as is shown in FIG. 3, in ROM and RAM.); *wherein said first reference data is determined based on class data and said second reference data comprises an index value for one or more field data* (column 7 lines 45-52: "A **first entry contains the name of the class** and the name of the superclass 502. These names are stored as string constants and the first entry contains pointers to the locations of these strings in the constant pool. **The next entry pertains to the fields** or instance variables. A header 504 is used to denote the number of fields in the constant pool. The various fields 506 follow the header.";

also column 7 lines 16-17: "an array of one or more pointers 636, **each pointer referencing a field block**;" Pointer 636 serves as an index into the field table.);

a program executing means to execute said program, which specifies said location in said memory to be accessed based on said result data of said resolved reference linking to said program through said reference data, when said program is executed which requires access to said result data (column 2 lines 53-55 cited above describes a program executing means. All other limitations in this section have also been addressed in the above passages.).

As per claim 3, the above rejection of claim 2 is incorporated. Tock further discloses:

An information processing device according to claim 2, wherein said program comprises

an object program in byte code and data which represent the content of reference data linked to said program (column 3 lines 46-49; column 4 lines 25-29; column 5 lines 65-67), *and*

said program executing means stores said result data of said resolved reference in a link reference field provided for linking to said object program (column 9 lines 7-12).

As per claim 4, the above rejection of claim 3 is incorporated. Tock further discloses:

An information processing device according to claim 3, wherein

said link information provided for linking to said object program contains code data of a number of fixed lengths (column 6 lines 22-26), *and*

said result data of said resolved reference is stored in a predetermined location determined by head code data (column 7 lines 47-49).

As per claim 5, the above rejection of claim 4 is incorporated. Tock further discloses:

An information processing device according to claim 4, wherein said object program and said link information are read out of a ROM at the time of executing said program (column 3 lines 19-20).

In regard to claim 6, the above rejection of claim 1 is incorporated. Tock further discloses: *wherein said class related reference data comprises at least one resolved class table index data and said field related reference data comprises at least one resolved field table index data* (column 7 lines 16-17 and 31-35).

In regard to claim 7, the above rejection of claim 1 is incorporated. All further limitations have been addressed in the above rejection of claim 6.

In regard to claim 8, the above rejection of claim 1 is incorporated. Tock further discloses: *wherein said resolved field related reference data further comprises an operand containing an object offset value indicating an object memory retrieval address* (FIG. 6 element 620).

In regard to claim 9, the above rejection of claim 1 is incorporated. Tock further discloses: *wherein said field related reference data is a position index data indicating a relationship of a data element within a table* (column 7 lines 16-17).

In regard to claim 10, the above rejection of claim 9 is incorporated. Tock further discloses: *wherein said position index data indicates a relationship of said data element to other data elements within a sequence of data elements in said table* (FIG. 6 elements 636 indicates a position relative to other data elements in a sequence).

In regard to claim 11, the above rejection of claim 1 is incorporated. Tock further discloses: *wherein said reference data further comprises a third reference data* (FIG. 6 element 634).

In regard to claim 12, the above rejection of claim 11 is incorporated. All further limitations have been addressed in the above rejection of claim 11.

In regard to claim 13, the above rejection of claim 12 is incorporated. All further limitations have been addressed in the above rejection of claim 11.

In regard to claim 14, the above rejection of claim 1 is incorporated. Tock further discloses dynamic loading which inherently extracts and stores objects during execution, otherwise data references would be inaccessible (column 1 lines 44-46).

In regard to claim 15, the above rejection of claim 2 is incorporated. All further limitations have been addressed in the above rejection of claim 6.

In regard to claim 16, the above rejection of claim 2 is incorporated. Tock further discloses: *a third reference data, said third reference data comprising a first data structure for storing character data and a second data structure for storing data indicating a position within said first data structure for storing character data* (FIG. 6 elements 618 and 620).

As per claim 17, the above rejection of claim 2. All further limitations have been addressed in the above rejection of claim 11.

As per claim 18, the above rejection of claim 3 is incorporated. All further limitations have been addressed in the above rejection of claim 4.

As per claim 19, the above rejection of claim 3 is incorporated. All further limitations have been addressed in the above rejection of claim 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (703) 605-5233. The examiner can normally be reached on M-F 6:30-3:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached at (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. After October 28, 2004, the examiner can be reached at new telephone number (571) 272- 3703, and the examiner's supervisor, Tuan Q. Dam can be reached at (571) 272-3694.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jdr

Hoang-Anthony Nguyen-Ba

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PRIMARY EXAMINER